



**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2013-0520; Directorate Identifier 2013-SW-027-AD;**

**Amendment 39-17484; AD 2013-12-06]**

**RIN 2120-AA64**

**Airworthiness Directives; Eurocopter Deutschland (Eurocopter) Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule; request for comments.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for Eurocopter Model MBB-BK117 A-3, MBB-BK117 A-4, MBB-BK117 B-1, and MBB-BK117 C-2 helicopters with a Metro Aviation (Metro) vapor-cycle air conditioning kit installed in accordance with Supplemental Type Certificate (STC) No. SH3880SW. This AD requires repetitively inspecting the air conditioning drive pulley (pulley) for looseness and properly installed lockwire, and also requires reinstalling the pulley. This AD is prompted by two reports of the pulley detaching from the rotor brake disc on the tail rotor (T/R) driveshaft. These actions are intended to prevent separation of the pulley, damage to the T/R driveshaft, and subsequent loss of control of the helicopter.

**DATES:** This AD becomes effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

We must receive comments on this AD by [INSERT DATE 60 DAYS AFTER

DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments by any of the following methods:

- Federal eRulemaking Docket: Go to <http://www.regulations.gov>. Follow the online instructions for sending your comments electronically.
- Fax: 202-493-2251.
- Mail: Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.
- Hand Delivery: Deliver to the “Mail” address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the STC, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (telephone 800- 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

For service information identified in this AD, contact Metro Aviation, Inc., 1214 Hawn Ave, Shreveport, LA 71107; phone: (318) 222-5529; website: [metroproductsupport.com](http://metroproductsupport.com). You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

**FOR FURTHER INFORMATION CONTACT:** Martin Crane, Aviation Safety Engineer, Rotorcraft Certification Office, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5056; email [7-AVS-ASW-170@faa.gov](mailto:7-AVS-ASW-170@faa.gov).

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

This AD is a final rule that involves requirements affecting flight safety, and we did not provide you with notice and an opportunity to provide your comments prior to it becoming effective. However, we invite you to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that resulted from adopting this AD. The most helpful comments reference a specific portion of the AD, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit them only one time. We will file in the docket all comments that we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning this rulemaking during the comment period. We will consider all the comments we receive and may conduct additional rulemaking based on those comments.

**Discussion**

STC No. SH3880SW approves the installation of the Metro vapor-cycle air conditioning kit on Eurocopter Model MBB-BK117 A-3, MBB-BK117 A-4, MBB-BK117 B-1, and MBB-BK117 C-2 helicopters. The air conditioning compressor is driven

by a pulley attached to the rotor brake disc. We received a report of a recent incident where the fasteners attaching the air conditioning compressor pulley to the rotor brake disc lost torque and allowed the pulley to separate. After the helicopter landed without incident, the pulley was discovered loose, rotating freely on, and causing damage to the T/R driveshaft. A prior incident in 2008 occurred where the pulley mount bolts sheared, resulting in the pulley detaching from the rotor brake disc. Separation of the pulley from the rotor brake disc could damage the T/R driveshaft, resulting in subsequent loss of control of the helicopter.

#### **FAA's Determination**

We are issuing this AD because we evaluated all information provided by Metro and determined the unsafe condition exists and is likely to exist or develop on other helicopters of these same type designs.

#### **Related Service Information**

We reviewed Metro Alert Service Bulletin No. MA145-21A-003, Revision A, dated April 26, 2013 (ASB MA145-21A-003), which describes procedures to inspect the pulley for properly installed lockwire, and for removing, inspecting, and re-installing the pulley.

#### **AD Requirements**

This AD requires, before further flight, and thereafter at intervals not exceeding 10 hours time-in-service (TIS), inspecting the pulley for looseness and proper installation of the lockwire on the pulley mount bolts.

Additionally, within 25 hours TIS, this AD requires removing the pulley, inspecting the bolts and mounting holes with a 10X or higher magnifying glass for

damage or distortion, and re-installing the pulley. If there is any damage or distortion, this AD requires replacing the damaged pulley.

#### **Differences between this AD and the Manufacturer's Service Information**

This AD requires repetitively inspecting the pulley bolts every 10 hours TIS; the ASB does not require the repetitive inspections after re-installing the pulley.

This AD also applies to Model MBB-BK117 A-3, MBB-BK117 A-4, MBB-BK117 B-1, and MBB-BK117 C-2 helicopters; the ASB only applies to Model MBB-BK C-2 helicopters.

#### **Interim Action**

We consider this AD to be an interim action. The design approval holder is currently developing a modification that will address the unsafe condition identified in this AD. Once this modification is developed, approved, and available, we might consider additional rulemaking.

#### **Costs of Compliance**

We estimate that this AD will affect 75 helicopters of U.S. Registry. We estimate that operators may incur the following costs in order to comply with this AD. At an average labor rate of \$85 per hour, inspecting the pulley will require about .5 work-hour, for a cost per helicopter of \$43, and a total cost of \$3,225 for the fleet per inspection cycle. Inspecting and re-installing the pulley will require about 2 work-hours, for a cost per helicopter of \$170, and a total cost of \$12,750 for the fleet.

If necessary, replacing a damaged pulley would require about 2 work-hours, and required parts would cost \$525, for a total cost per helicopter of \$695.

## **FAA's Justification and Determination of the Effective Date**

Providing an opportunity for public comments prior to adopting these AD requirements would delay implementing the safety actions needed to correct this known unsafe condition. Therefore, we find that the risk to the flying public justifies waiving notice and comment prior to the adoption of this rule because the required corrective actions must be accomplished within 25 hours TIS or 30 calendar days, a very short time period based on the average flight hour utilization rate of these helicopters in the air ambulance and offshore operations industries.

Since an unsafe condition exists that requires the immediate adoption of this AD, we determined that notice and opportunity for public comment before issuing this AD are impracticable and that good cause exists for making this amendment effective in less than 30 days.

## **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products

identified in this rulemaking action.

### **Regulatory Findings**

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify that this AD:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

**§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2013-12-06 **EUROCOPTER DEUTSCHLAND (EUROCOPTER)**: Amendment 39-17484; Docket No. FAA-2013-0520; Directorate Identifier 2013-SW-027-AD.

**(a) Applicability.**

This AD applies to Eurocopter Model MBB-BK 117 A-3, MBB-BK 117 A-4, MBB-BK 117 B-1, and MBB-BK 117 C-2 helicopters with a Metro Aviation, Inc. (Metro) vapor-cycle air conditioning kit installed in accordance with Supplemental Type Certificate (STC) No. SH3880SW, certificated in any category.

**(b) Unsafe Condition.**

This AD defines the unsafe condition as loosening of an air conditioning drive pulley (pulley) mount bolt, which could result in separation of the pulley from the rotor brake disc on the tail rotor (T/R) driveshaft, damage to the T/R driveshaft, and subsequent loss of control of the helicopter.

**(c) Effective Date.**

This AD becomes effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(d) Compliance.**

You are responsible for performing each action required by this AD within the specified compliance time.



**(e) Required Actions.**

(1) Before further flight, and thereafter at intervals not exceeding 10 hours time-in-service (TIS), inspect the lockwire securing the pulley mount bolts for proper installation and the pulley for looseness. If the lockwire is damaged or broken, or is not installed in a tightening direction, or if the pulley is loose, remove and inspect the pulley as described in paragraphs (e)(2)(i) and (e)(2)(ii) of this AD.

(2) Within 25 hours TIS:

(i) Remove the pulley from the rotor brake disc and, using a 10X or higher power magnifying glass, inspect the bolts and mounting holes glass for damage or distortion. If there is any damage or distortion, replace the pulley.

(ii) Install the pulley and torque each mount bolt to 90 inch-pounds. After torquing, determine whether a gap exists among each bolt head, washer, and the mating surface of the rotor brake disc. If there is a gap, replace the pulley.

(iii) Lock wire each pulley mount bolt to its adjacent rotor brake mounting bolt with 0.6 millimeter lockwire.

**(f) Special flight permits.**

Special flight permits are prohibited.

**(g) Alternative Methods of Compliance (AMOCs).**

(1) The Manager, Rotorcraft Certification Office, FAA, may approve AMOCs for this AD. Send your proposal to: Martin Crane, Aviation Safety Engineer, Rotorcraft Certification Office, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5056; email [7-AVS-ASW-170@faa.gov](mailto:7-AVS-ASW-170@faa.gov).

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office, before operating any aircraft complying with this AD through an AMOC.

**(h) Additional Information.**

(1) Metro Alert Service Bulletin No. MA145-21A-003, Revision A, dated April 26, 2013, which is not incorporated by reference, contains additional information about the subject of this AD. For service information identified in this AD, contact Metro Aviation, Inc., 1214 Hawn Ave, Shreveport, LA 71107; phone: (318) 222-5529; website: [metroproductsupport.com](http://metroproductsupport.com). You may review a copy of the service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

(2) STC No. SH3880SW, amended April 16, 2004, may be found on the Internet at <http://www.regulations.gov> in Docket No. FAA-2013-0520.

**(i) Subject.**

Joint Aircraft Service Component (JASC) Code: 6500: Tail Rotor Drive.

Issued in Fort Worth, Texas, on June 13, 2013.

Kim Smith,

Directorate Manager, Rotorcraft Directorate,

Aircraft Certification Service.

[FR Doc. 2013-16388 Filed 07/08/2013 at 8:45 am; Publication Date: 07/09/2013]